

REMARKS

This application has been reviewed in light of the Office Action mailed on March 27, 2003. Claims 1-10 are pending in the application with Claim 1 being in independent form. By the present amendment, the specification and Claim 1 have been amended. No new matter or issues are believed to be introduced by the amendments.

In the Office Action, the specification was objected to. The specification has been amended in a manner which is believed to obviate the objection. Withdrawal of the objection is respectfully requested.

Claims 1-3 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,084,085 issued to Morad on January 21, 1992 ("Morad").

Claim 1 has been amended in a manner which is believed to better define Applicants' invention and to overcome the rejection. Claim 1 has been amended to recite "A magnetic resonance imaging apparatus (1) comprising a gradient coil assembly (3, 4, 5) for generating gradient magnetic fields in an imaging volume, the gradient coil assembly (3, 4, 5) comprising at least three gradient coils (3, 4, 5) for generating three different gradient magnetic fields, wherein a conductive element (71, 72, 73) is provided in close proximity to at least one of the gradient coils (3, 4, 5) in order to compensate self-induced eddy currents in the gradient coil assembly (3, 4, 5), and wherein each of the gradient coils comprise a pair of coil elements arranged in different planar axis."

(Emphasis added)

Morad does not disclose or suggest at least the newly added limitations to Claim 1. Morad discloses a compact shield gradient coil system having a first set of gradient coils coaxially surrounded by a conducting shield. A second set of gradient coils coaxially

surrounds the conducting shield. The first and second sets of gradient coils and the conducting shield are therefore coaxially arranged and produce a linear gradient field inside the imaging volume. (See, e.g., FIG. 1 and col. 2, line 64 to col. 3, line 6) The first and second sets of gradient coils do not include a pair of coil elements arranged in different planar axis, as recited by Applicants' Claim 1. Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) and allowance of Claim 1 are respectfully requested.

Claims 2-3 depend from Claim 1, and therefore include the limitations of Claim 1. Accordingly, for the same reasons given for Claim 1, Claims 2-3 are believed to contain patentable subject matter. Hence, withdrawal of the rejection under 35 U.S.C. §102(b) and allowance of Claims 2-3 are respectfully requested.

Claims 4-6 and 10 were rejected under 35 U.S.C. §103(a) over Morad in view of Doty (WO 94/01785) ("Doty").

Claims 4-6 and 10 depend from Claim 1, and therefore include the limitations of Claim 1. Accordingly, for the same reasons given for Claim 1, Claims 4-6 and 10 are believed to contain patentable subject matter. Hence, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of Claims 4-6 and 10 are respectfully requested.

Claims 8 and 9 were rejected under 35 U.S.C. §103(a) over Morad in view of Mulder et al. (WO 00/25146) ("Mulder et al.").

Claims 8 and 9 depend from Claim 1, and therefore include the limitations of Claim 1. Accordingly, for the same reasons given for Claim 1, Claims 8 and 9 are believed to contain patentable subject matter. Hence, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of Claims 8 and 9 are respectfully requested.

Claim 7 was rejected under 35 U.S.C. §103(a) over Morad.

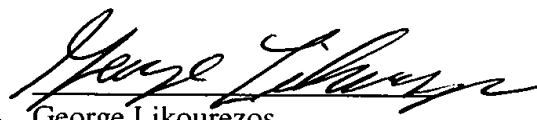
Claim 7 depends from Claim 1, and therefore includes the limitations of Claim 1. Accordingly, for the same reasons given for Claim 1, Claim 7 is believed to contain patentable subject matter. Hence, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of Claim 7 are respectfully requested.

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-10, are believed to be in condition for allowance and patentably distinguishable over the art of record.

Attached hereto and identified as VERSION WITH MARKINGS TO SHOW CHANGES MADE is a copy of the amendments to the specification and amended Claim 1 detailing the amendments made thereto.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call John Vodopia, Esq., Intellectual Property Counsel, Philips Electronics North America, at 914-333-9627.

Respectfully submitted,


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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The two paragraphs beginning at page 4, line 7:

-- Fig. 10 shows a cross section of a correction coil for a z-gradient coil according to the invention; [and]

Fig. 11 shows a cross section of another embodiment of a correction coil for a z-gradient coil[.]; and--

IN THE CLAIMS:

1. (Amended) A magnetic resonance imaging apparatus (1) comprising a gradient coil assembly (3, 4, 5) for generating gradient magnetic fields in an imaging volume, the gradient coil assembly (3, 4, 5) comprising at least three gradient coils (3, 4, 5) for generating three different gradient magnetic fields,

[characterized in that] wherein a conductive element (71, 72, 73) is provided in close proximity to at least one of the gradient coils (3, 4, 5) in order to compensate self-induced eddy currents in the gradient coil assembly (3, 4, 5), and wherein each of the gradient coils comprise a pair of coil elements arranged in different planar axis.